

REMARKS

Upon entry of this Amendment, claims 1-5 and 7-12 will be pending in this application. Claims 1 and 7 have been amended to incorporate the subject matter of claim 6; new claims 9-12 have been added; and claim 6 has been cancelled. Support for new claims 9-12 can be found, *inter alia*, in the specification at page 13, lines 8-15. Hence, the amendments to claims 1 and 7, and the addition of new claims 9-12, do not constitute new matter. Entry is respectfully requested.

Applicants respectfully note that the Office Action indicates that each reference listed in Applicants' Information Disclosure Statements filed May 9, 2007 have been considered. However, Applicants did not file an Information Disclosure Statement on May 9, 2007.

Rejections under 35 U.S.C. § 102(b)

Claims 1-4 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Kojima et al (US 5,589,116).

Claim 7 is rejected under 35 U.S.C. § 102(b) as being anticipated by Endo et al (JP 2001-146494).

The Examiner asserts that Kojima et al discloses each feature of claims 1-4, and that Endo et al. discloses each feature of claim 7.

In particular, the Office Action takes the position that Kojima et al. teaches, through the ranges of disclosed weight ratios, the volume ratio of silicone carbide indicated by the Applicants in claims 1 and 2. The Office Action also takes the position that the silicone carbide sintered body of Kojima et al. can be used as a target.

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With particular reference to claim 3, the Office Action asserts that Kojima et al. teaches a sputtering target containing silicone carbide and silicone prepared by a reaction sintering method (column 9, lines 40-54). Moreover, the recitation “prepared by a reaction sintering method” is a product-by-process limitation, and thus is accorded no patentable weight.

Applicants respectfully traverse the rejections.

Instant claims 1 and 7, from which all remaining claims depend, have been amended to include the subject matter of claim 6, i.e., to further recite “...silicon carbide powder having a most frequent grains of about 1.7 to about 2.7 μm and a silicon carbide powder having most frequent grains of about 10.5 to about 21.5 μm .”

Claim 6 is non-rejected in the anticipation rejections discussed herein. Accordingly, neither of Kojima et al nor Endo et al. were cited for, nor disclose, the features of claims 1 or 7 as amended, and are thus not anticipatory.

Withdrawal of the rejections and immediate allowance of all pending claims are earnestly solicited.

Rejection under 35 U.S.C. § 103(a)

Claims 1 and 2 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kojima et al. in view of Furese et al. (US 5,196,386); claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kojima et al. and Furese et al. as applied to claim 1 above, and further in view of Takahashi (US 6,217,969); and claims 5 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kojima et al. and Furese et al. as applied to claim 1 above, and further in view of Nagasawa (JP 08-183635).

With respect to claims 1 and 2, the Office Action appears to reject the claims over the combined references in the event that the claimed volume ratios are not equivalent to Kojima et

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al.'s disclosed weight ratios. The Office Action asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Kojima et al. with a volume ratio of silicone carbide in the range of 50-70%, as taught by Furese et al., because it would produce a body with a high degree of toughness and mechanical strength (column 4, lines 30-32).

Regarding claim 6, The Office Action asserts that Kojima et al. teaches a sputtering target with a silicone carbide powder comprising a mixture of a silicone carbide powder having an average particle size of about 0.5-20 microns (column 3, lines 35-36), but is silent on using two different particles sizes, which is allegedly disclosed in Takahashi. Therefore it would have allegedly been obvious to one of ordinary skill in the art at the time of the invention to modify Kojima et al. to incorporate particles of two different average sizes, as taught by Takahashi, because it would increase the packing density of particles and the reactivity of silicone carbide during the preparation of the sintered silicone carbide (column 3, lines 51-60).

With respect to claims 5 and 8, the Office Action cites Kojima et al. and Furese et al. as applied to claim 1, and further cites Nagasawa as disclosing a covering layer (SiC film) formed on a glass substrate (Abstract of Nagasawa). The Office Action asserts that the volume resistivity of about 3.0×10^3 (OMEGA/cm) or less, and the refractive index of 4.16 or less measured at an optical wavelength of 633 nm, of the covering layers formed on the glass substrate would be inherent to the SiC film formed. It would thus allegedly have been obvious to modify the device of Kojima et al. and Furese et al. with a covering layer, as taught by Nagasawa, because it would be useful as an X-ray mask, phase shift mask, a substrate for a TFT or optical magnetic recording media or in other areas where a transparent conductive film is needed.

Applicants respectfully traverse the rejection.

Amended claims 1 and 7 are discussed above. The features of claims 1 and 7, from which all remaining claims depend, impart superior characteristics to a sputtering target. For example, when either i) the flow rate of oxygen or nitrogen gas; or ii) the amount of electric power is controlled, a sputtering target is obtained in which the refractive index in a covering layer thereof is adjustable over a wide range. Additionally, at least due to reduced volume resistivity, the sputtering target obtained is compatible with a DC power source. See, *inter alia*, the specification at pages 25 and 26.

In view of the foregoing, none of Kojima et al., Furese et al., Takahashi or Nagasawa, alone or in combination, would have rendered obvious the instantly claimed invention.

Withdrawal of the rejection and immediate allowance of all pending claims are earnestly solicited.

Obviousness-Type Double Patenting Rejection

Claims 1-8 are rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 7,335,330; over claims 1-15 of U.S. Patent No. 6,632,761; and over claims 1-7 of U.S. Patent No. 6,699,411.

The Office Action takes the position that, although the conflicting claims recited in each respective patent cited are not identical to the instant claims, they are not patentably distinct from each other because Patent Nos. 7,335,330; 6,632,761 and 6,699,411 each allegedly encompasses and anticipates all the limitations of the instant claims.

Applicants respectfully traverse the rejection.

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Amended independent claims 1 and 7 are discussed above in connection with the anticipation and obviousness rejections. This rejection is overcome at least because of the criticality of the specific features claimed, and the advantages flowing therefrom, over the claims of each of Patent Nos. 7,335,330; 6,632,761 and 6,699,411.

Hence, all pending claims are patentably distinct over the claims of each of Patent Nos. 7,335,330; 6,632,761 and 6,699,411.

Withdrawal of the rejection and immediate allowance of all pending claims are earnestly solicited.


Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The U.S. Patent and Trademark Office is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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